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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,707	10/16/2003	Steven John Fett	9-2993-498US	6769

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EXAMINER

NGUYEN, NINH H

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/685,707

Applicant(s)

FETT ET AL.

Examiner

Ninh H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-11 is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/04/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to because of the following informalities: the claim is dependent on claim 13 but there are only 11 claims filed with the application. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for lack of antecedent basis for the limitation "the second pin" on line 2 of the claim.

It is suggested that Applicant changes "13" on line 1 of the claim to --5--, and changes "pin" on line 2 of the claim to --element-- to avoid indefiniteness.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1-3, 5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Bunker et al. (5,328,331).

Bunker discloses a gas turbine engine rotor blade (Figs. 3-6) comprising an airfoil 34 extending from a root end to a tip end, the root end mounted to a connection apparatus for securing the blade to the engine (Fig. 2), the airfoil having a leading edge, a trailing edge and an outer periphery (Fig. 2), the outer periphery defined by a pressure side and a suction side each extending from the leading edge to the trailing edge (Fig. 3); a recess defined in the airfoil extending from tip end towards the root end, the recess having first and second sides corresponding to the airfoil pressure and suction sides ; and at least one reinforcing element 60 disposed in the recess and extending from the first side to the second side, the element disposed in the recess in a position adapted, in use, inherently minimize a trailing edge bending of the blade by reason of said position of the element in the recess (col. 5, lines 34-41);

wherein the reinforcing element comprises a stiffening pin (Fig. 4);

wherein the recess extends into the airfoil at least 50 percent of a distance between the tip end and the root end (Fig. 4); and

wherein the rotor blade further comprising at least a second element (Fig. 4) extending across the recess from the first side to the second side.

Regarding claim 7, the recess having a widest point close to the leading edge of the airfoil (Fig. 3) and the at least one reinforcing element 60 positioned in the recess aft of the widest point.

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6. Claims 1, 3-5, and 7 are rejected under 35 U.S.C. 102(3) as being anticipated by Wang et al. (6,481,972).

Wang discloses a gas turbine engine rotor blade (Figs. 2, 3) comprising an airfoil extending from a root end to a tip end, the root end mounted to a connection apparatus for securing the blade to the engine (Fig. 3), the airfoil having a leading edge, a trailing edge and an outer periphery (Fig. 3), the outer periphery defined by a pressure side and a suction side each extending from the leading edge to the trailing edge (Fig. 3); a recess defined in the airfoil extending from tip end towards the root end, the recess having first and second sides corresponding to the airfoil pressure and suction sides ; and at least one reinforcing element 20 disposed in the recess and extending from the first side to the second side, the element disposed in the recess in a position adapted, in use, minimize a trailing edge bending of the blade by reason of said position of the element in the recess (col. 1, lines 44-49);

wherein the recess extends into the airfoil at least 50 percent of a distance between the tip end and the root end (Fig. 3);

wherein the recess first and second sides extend from a recess leading edge side to a recess trailing edge side, and wherein the element located closer to the recess trailing edge side than to the recess leading edge side (Fig. 3);

wherein the rotor blade further comprising at least a second element (Fig. 3) extending across the recess from the first side to the second side.

Regarding claim 7, the recess having a widest point close to the leading edge of the airfoil (Fig. 3) and the at least one reinforcing element 20 positioned in the recess aft of the widest point.

Allowable Subject Matter

7. Claims 8-11, due to the method steps of analyzing the geometry of the blade and proving a reinforcing element to minimize second mode bending in the trailing edge, are allowed.
8. Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph and the claim objections, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Prior Art

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure and consists of 1 patent.

Leibfried (5,692,881) is cited to show an airfoil having reinforcing ribs.

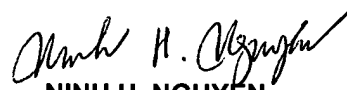
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ninh Nguyen whose telephone number is (571) 272-4823. The examiner can be normally reached on Monday-Friday from 7:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (571) 272-4820. The fax number for this group is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, please go to <http://pair-direct.uspto.gov> or contact the Electronic Business center (EBC) at 866-217-9197 (toll-free).


NINH H. NGUYEN
PRIMARY EXAMINER

Nhn
November 30, 2004